

A NEW SPECIES OF HELICIA, NEW COMBINATIONS AND LECTOTYPIFICATION IN TRIUNIA (PROTEACEAE) FROM AUSTRALIA

by

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ABSTRACT

Foreman, D. B. A new species of *Helicia*, new combinations and lectotypification in *Triunia* (Proteaceae) from Australia. *Muelleria* 6(3): 193-196 (1986). — *Helicia recurva* sp. nov. is described, together with notes on distribution, habitat and diagnostic features. *Helicia youngiana* C. Moore & F. Muell. var. *montana* C. White and *H. youngiana* var. *robusta* C. White are raised to species level in the genus *Triunia* L. Johnson & B. Briggs; lectotypes are designated for these two taxa.

HELICIA LOUR.

In a recent review of the genus *Helicia* Lour. in Australia (Foreman 1983) particular comment was made on two collections from north Queensland, viz. *C. T. White 10643* (BRI) from Mt Spurgeon and *H. Flecker 2330* (QRS) from Upper Mossman River. These collections were tentatively placed under *Helicia australasica* F. Muell., although at the time it was pointed out that the leaves were more coriaceous than usual for that species and the margins of the leaves were recurved, a feature which had not been seen in other specimens of *H. australasica*. Further matching collections from much the same localities, in flower and young fruit, have now been seen and it has become apparent that these collections belong to a distinct taxon which I now describe.

Helicia recurva D. Foreman, sp. nov.

Arbor ad 10 m alta. *Foliorum* lamina plerumque elliptica vel parum obovata, acuta ad acuminata, versus basin cuneata ad attenuata, 5-13.5 cm longa, 2.5-5 cm lata, coriacea, juventute sparsim ferrugineo-pilosa; margines recurvi, integri vel dentibus paucis parvis instructi; nervi 5-9-jugi, in pagina abaxiali elevati, prominentes; petiolus 5-8 mm longus. *Inflorescentia* axillaris, 7-11.5 cm longa, ferrugineo-pilosa. *Pedicelli* 2 mm longi, ferrugineo-pilosa. *Perianthium* 10-13 mm longum, ± glabrum. *Ovarium* sparsim pilosum, pilis ferrugineis vel rufis. *Fructus* immaturus, eo *H. australasicae* similis; pericarpium coriaceum.

Tree to 10 m tall. *Branchlets* terete, ferruginous-pilose to ferruginous-tomentose towards the tips, becoming glabrous lower down. *Leaf blade* mostly elliptic or slightly obovate, acute to acuminate, cuneate to attenuate at the base, 5-13.5 cm long, 2.5-5 cm wide, coriaceous, sparsely ferruginous-pilose when young particularly on the midrib and main nerves, becoming glabrous, drying olivaceous to yellowish-green above, mid- to light-brown beneath; margin recurved, entire or with a few small irregularly spaced teeth mostly towards the apex; midrib flattened to slightly sunken above, raised and very prominent beneath; nerves 5-9 pairs, slightly sunken above, raised and very prominent beneath, straight in the lower half to two-thirds, curved upwardly and anastomosing towards the margin; reticulations obscure, dense, slightly raised on both surfaces; petiole 5-8 mm long, with a well defined pulvinus. *Inflorescence* axillary, 7-11.5 cm long, ferruginous-pilose; rachis 1 mm diam. *Bract* subtending flower pairs 1 mm long, ferruginous-pilose. *Floral bracts* 0.5 mm long, ferruginous-pilose. *Pedicels* 2 mm long, ferruginous-pilose. *Perianth* 10-13 mm long, glabrous or sparsely ferruginous-pilose; limb 3 mm x 1.5 mm, fusiform. *Anthers* 1.5 mm long. *Hypogynous glands* free, rounded. *Ovary* sparsely ferruginous- to rufous-pilose; style glabrous; pollen presenter 2 mm x 0.5 mm, fusiform. *Fruit* (immature, about half ripe) final size and shape not discernible but apparently ± similar to *H. australasica*; pericarp coriaceous. (Fig. 1).

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Helicia recurva
Foreman

A. J. P.
D. FOREMAN

... P. V. ...
... glabrous leaves and
...
D. Foreman, ...
C. T. No. 10643, September 1936.
Small tree in rain forest.

NATIONAL HERBARIUM OF VICTORIA

Helicia recurva D. Foreman
D. Foreman 10643



Fig. 1. *Helicia recurva* D. Foreman. Holotype.

TYPE COLLECTION:

Mt Spurgeon, North Queensland, ix.1936, *C. T. White 10643* (flowering collection). (HOLOTYPE: BRI 164227. ISOTYPES: BRI 164226; MEL 1540426).

FURTHER SPECIMENS EXAMINED:

Queensland — Upper Mossman River, 21.x.1938, *Flecker 2330* (QRS); Platypus Creek at head of Mossman River, ix.1972, *Tracy 14883* (BRI); near Schillers Hut, Mt Spurgeon, ix.1972, *Webb & Tracey 13370* (BRI).

DISTRIBUTION AND HABITAT:

Known only from Mt Spurgeon and the upper reaches of the Mossman River. In simple notophyll vine forest on soils derived from granite, at altitudes to 1250 metres.

DISCUSSION:

The specific epithet refers to the recurved leaf margin, a feature not seen in other Australian species of *Helicia*.

H. recurva appears to be most closely allied to *H. australasica*. Both species have distinct petioles, glabrous or near-glabrous leaves and hairy ovaries. The only other *Helicia* species to have this combination of characters is *H. grayi* Foreman which can be distinguished immediately by its much longer pedicels and perianth segments.

H. recurva can be distinguished from *H. australasica* (syn. *H. glabrescens* C. White) (Foreman 1983) and also from *H. grayi* by its more coriaceous leaves with midrib and main nerves impressed above and very prominent beneath, giving many of the leaves a sub-bullate appearance, by its recurved leaf margin (this feature appears to be fairly consistent in all the dried material examined) and by the predominantly elliptic leaf shape. The flowers of *H. recurva* and *H. australasica* are quite similar although those of *H. recurva* tend to have fewer hairs.

TRIUNIA L. JOHNSON & B. BRIGGS

Johnson & Briggs (1975) established the genus *Triunia* by raising to generic rank *Helicia* section *Macadamopsis* Sleum., typifying it by *Helicia youngiana* C. Moore & F. Muell. They considered at this time that the genus included "one or two further species" although formal combinations were not made. Since *Helicia youngiana* var. *montana* C. White and *Helicia youngiana* var. *robusta* C. White both appear to be distinct from each other and from *Triunia youngiana* (C. Moore & F. Muell.) Johnson & Briggs they are here raised to species rank, giving a total of three species of *Triunia* present in Australia.

Triunia montana (C. White) D. Foreman, comb. et stat. nov.

Helicia youngiana C. Moore & F. Muell. var. *montana* C. White, Contr. Arnold Abor. 4: 24 (1933). LECTOTYPE (here designated): Bellenden Ker, Palm Camp, Meston's Bellenden Ker Expedition, 1889, *F. M. Bailey s.n.* (BRI 164626). SYNTYPES: Bellenden Kerr near the summit, i. 1923, *C. T. White s.n.* (BRI 164310 & 164311).

At one time it was thought that *T. montana* was restricted in its distribution to the Bellenden Ker Range in north Queensland (White 1933). However, now it has been found on Mt Lewis and the Great Dividing Range, north-west of Mossman in the vicinity of Black Mountain and Mt Spurgeon.

T. montana can be distinguished from both *T. youngiana* and *T. robusta* by its entire, acuminate, coriaceous, smooth glossy leaves which dry \pm the same colour above and beneath. The flowers of all three species are more or less similar, but the perianth segments of *T. montana* are less hairy than those of either *T. youngiana*

or *T. robusta* and they have a characteristic tuft of hairs about 1-1.5 mm long at the end of the limb.

REPRESENTATIVE SPECIMENS SEEN:

Queensland — State Forest Reserve 310, Bellenden Ker Logging Area, 26.ix.1975, *Dockrill 1084* (QRS); Timber Reserve 140, Zarda Logging Area, 17.iv.1968, *Hyland 4935* (QRS); Summit of Mt Bellenden Ker, 2.viii.1971, *Hyland 5320* (QRS); Bellenden Ker, 30.xi.1972, *Hyland 6571* (QRS); Mt Bartle-Frere, i.1891, *Johnson s.n.* (MEL).

Triunia robusta (C. White) D. Foreman, comb. et stat. nov.

Helicia youngiana C. Moore & F. Muell. var. *robusta* C. White, *Contr. Arnold Arbor.* 4: 23 (1933). LECTOTYPE (here designated): Eumundi, xi. 1892, *J. H. Simmonds s.n.* (BRI 164315). ISOLECTOTYPE: Eumundi, xi. 1892, *J. H. Simmonds s.n.* (BRI 164314). SYNTYPES: Maroochie [Yandina], vii. 1888, *F. M. Bailey s.n.* (BRI 022471); Eumundi, xi. 1894, *F. M. Bailey & J. H. Simmonds s.n.* (BRI 164313); Eumundi, 1900, *J. F. Bailey s.n.* (BRI 164317); Maroochie [Yandina], *J. Low s.n.* (BRI 164316); Eumundi, xi. 1892, *J. B. Staer s.n.* (BRI 164312).

Triunia robusta is most closely allied to *T. youngiana* but it can be distinguished by its larger oblong-elliptic leaves which are smooth and glossy above, mostly entire or with a few (sometimes deep) teeth towards the apex.

White (1933) included amongst the specimens he cited under *Helicia youngiana* var. *robusta* a collection from East Malanda, Atherton Tableland, 22.ix.1929, *S. F. Kajewski 1219* (BRI). This and other collections from north Queensland which have been referred to *H. youngiana* var. *robusta* appear to represent a distinct but as yet undescribed species.

There do not appear to be any recent collections of *Triunia robusta* from the Eumundi/Maroochie (Yandina) area and due to extensive clearing in the region this taxon may now be extinct.

ADDITIONAL SPECIMENS EXAMINED:

Queensland — Maroochie [Yandina], xi. 1879, *Bailey* (MEL 93791); Eumundi, *Shirley* (BRI 164284); Eumundi, v. 1892, *Simmonds* (BRI 105362).

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